

## THE EARLIEST DESCRIBED SPECIES OF HELOSCIOMYZIDAE (DIPTERA: SCHIZOPHORA)

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### Abstract

The nominal species *Sciomyza fuscinevris* Macquart, 1851, and *Helomyza vittata* Macquart, 1851, are referred to the family Helosciomyzidae in the new combinations *Helosciomyza fuscinevris* (Macquart) and *Cobergius vittatus* (Macquart). *Helosciomyza aliena* Malloch, 1928, is a new synonym of *H. fuscinevris*. *Cobergius canus* and *C. hirsutus* Barnes, 1981, are new synonyms of *C. vittatus*. A lectotype is designated for *H. vittata*.

### Introduction

The family Helosciomyzidae was formerly thought to include no species described before 1901 (see Barnes 1981). Study of types of species described by P.J.M. Macquart (1851) shows that two of these are helosciomyzids.

The helosciomyzid genera were first grouped together as a subfamily, Helosciomyzinae, of the Sciomyzidae by Steyskal (1965). This taxon was raised to family rank by Griffiths (1972) and by Barnes (1981), who presented a taxonomic review of the family. Griffiths, however, included in the family the huttoninid genera *Huttonina* Tonnoir and Malloch and *Prosochaeta* Malloch, the first of which Steyskal had included in the sciomyzid subfamily Huttonininae. Barnes excluded these from the Helosciomyzidae, and the Huttoninidae were given separate family rank by Colless and McAlpine (1991) and McAlpine (1991b).

Steyskal and Knutson (1978), stated: 'We believe that it [the subfamily Helosciomyzinae] is distinct from the Huttonininae and that both subfamilies are relicts of a stage in the phylogeny of the Sciomyzidae previous to the development of the habit of predation upon Mollusca.' I believe that the time or times of divergence of the Helosciomyzidae and Huttoninidae from the Sciomyzidae cannot be shown, on available evidence, to be later than their times of divergence from several other sciomyzoid families. I have recently discussed some family characters in the Sciomyzoidea in relation to the separation of the Heterocheilidae (McAlpine 1991b).

Barnes (1981) added five new genera to the five previously described helosciomyzid genera, 4 of the new ones including species previously placed in *Helosciomyza* Hendel. The morphological differences between these genera are often small, except, in some cases, for male postabdominal structures. It would seem that the broader earlier scope of *Helosciomyza* (as in Harrison 1959; Steyskal and Knutson 1978) made it no more diverse than such accepted acalyprate genera as *Suillia* Robineau Desvoidy and *Diplogeomyza* Hendel. Any reorganisation of generic limits in the family now would necessitate a much more detailed comparative morphological study.

The Helosciomyzidae have a south-temperate distribution in Australia, New Zealand and southern South America.

Type material referred to in this paper is located in the National Museum of Natural History, Paris (PM), the Australian Museum, Sydney (AM) and the Australian National Insect Collection, CSIRO, Canberra (ANIC).

***Helosciomyza fuscinevris* (Macquart) n. comb.**

*Sciomyza fuscinevris* Macquart, 1851: 276-277. Not homonym of *S. fuscinevris* Zetterstedt, 1838, now in *Tetanocera* Duméril.

*Helosciomyza aliena* Malloch, 1928: 324-325. N. syn.

The above synonymy is deduced from examination of the holotypes of both nominal species. The species is distinguished as indicated by Barnes (1981) and the distribution has been summarised by Steyskal and Knutson (1978). It lives also in the south-west of Western Australia (2♂♂, 1♀, Margaret River, xii.1970, G.A. Holloway, AM).

*Types examined*

Holotype ♂ of *Sciomyza fuscinevris*, Nouvelle-Hollande [New Holland = continental Australia, east coast added in publication - Macquart, 1851] anon (PM). Holotype ♂ of *Helosciomyza aliena*, Broken Hill [western New South Wales], 9.vi.1925, anon. (AM).

***Cobergius vittatus* (Macquart) n. comb.**

*Helomyza vittata* Macquart, 1851: 279, pl. 25, Fig. 16.

*Cobergius canus* Barnes, 1981: 50-51, Figs. 1, 2. N. syn.

*Cobergius hirsutus* Barnes, 1981: 52. N. syn.

The type series of *H. vittata* is in such poor condition that there was previously difficulty in its taxonomic placement (McAlpine 1985: 216). A recent re-examination (ix.1990) showed that it is referable to the little known helosciomyzid genus *Cobergius*.

Barnes described two species in this genus, *C. canus* and *C. hirsutus*, the former from one male from Kangaroo Island, South Australia, the latter from two females from the Furneaux Group, Bass Strait. Some of the given differences between these are simply sexual dimorphism, viz. the numbers of sternopleural and femoral bristles. In males of some other sciomyzoid flies (some species of Helcomyzidae and Coelopidae) the sternopleural, femoral, and other bristles are largely undifferentiated from the numerous long mollisetae, in contrast to females, which have less development of mollisetae and the major bristles well differentiated (McAlpine 1991a). The imperfect type specimens of *H. vittata* appear to demonstrate sexual dimorphism of this nature.

I evaluate the other differentiating characters given by Barnes for *C. canus* and *C. hirsutus* as follows. (1) There is no difference in the length of the frontal triangle between the types of the two species. (2) The holotype of *C. hirsutus*, lacks the 'scattered black setae' (Barnes' designation for setulae or fine hairs) on the scutellum, said to be diagnostic for this species. The major scutellar bristles are damaged, but the surface of the scutellum is not abraded. It is inconceivable that such short setulae as are present in the paratype could all have been removed by some accident in the holotype without disturbing the pruinescence or leaving sockets visible under good magnification. I therefore consider the holotypes of *C. canus* and *C. hirsutus* to agree in scutellar vestiture. (3) Slight differences in the contour of the discal crossvein (dm-cu) exhibited among the types of *C. canus* and *C. hirsutus* are no greater than can be expected to occur within sciomyzoid species, and cannot reasonably be taken as indicating specific heterogeneity.

All the specific differences given for separation of *C. canus* and *C. hirsutus* are judged invalid, and, from the close similarity of the specimens, they must be regarded as conspecific. Further, the types of *H. vittata* agree morphologically with these specimens. One paralectotype of *H. vittata* has a partly visible surstylus which appears similar to that of the holotype of *C. canus*. I conclude that there is only one known species in the genus *Cobergius* and that the three names listed above are synonyms.

#### *Types examined*

Lectotype ♀ of *H. vittata*, here designated, Tasmania, no date, J.P. Verreaux, group number 3/47 (PM). Paralectotypes, 3♂♂, same data, group numbers 3/47 and illegible (PM). Holotype ♂ of *C. canus*, Kangaroo Island [South Australia], 2.ix.63, D.A. M'Arthur (ANIC). Holotype ♀ of *C. hirsutus*, Fisher Island off Lady Barron, Flinders Island [Furneaux Group, Bass Strait], 29.xi.51-5.xii.51, J.H. Calaby (ANIC). Paratype ♀, west point of Babel Island, Furneaux Group, 17.iii.1950, T.G. Campbell (ANIC).

The types listed are all the material of *Cobergius* that has been available to me.

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